

Cl 14-17, 48-60 Ag?
Cl 19, 62-66, 69-70 PENDING CLAIMS
72-79

+ inactivatable tumor cells
GM-2 or? Cl 14 and
depends Cl 15-17

19. A method for inducing or enhancing in a subject the production of antibodies reactive with UTAA comprising administering an effective amount of the antigen composition of claim 62. 15-17

62. (Amended) An antigen composition comprising a substantially purified tumor antigen, wherein the tumor antigen is identified as comprising Urinary Tumor Associated Antigen (UTAA) subunit which, after reduction by β -mercaptoethanol and separation by SDS-polyacrylamide gel electrophoresis, exhibits a molecular weight of about 90 to 100 kD, and wherein said subunit contains glycosidase-sensitive carbohydrates, is heat stable at 100°C, and has an isoelectric point of about 6.1. 55

63. The antigen composition according to claim 62, wherein UTAA is purified at least about 100-fold over UTAA found in urine.

64. The antigen composition according to claim 62, wherein said UTAA is present as at least about 0.6% of total protein in said composition.

65. The method of claim 19, wherein said method comprises enhancing in a subject the production of antibodies reactive with UTAA.

66. The composition of claim 63, wherein said UTAA is purified 105-fold over UTAA found in urine.

67. (Canceled) The composition of claim 62, wherein said UTAA has an isoelectric point of about 6.1.

68. (Canceled) The composition of claim 62, wherein said UTAA is heat stable at 100°C.

69. The composition of claim 62, wherein said UTAA is about 95% free of immunoglobulin.

70. The composition of claim 62, wherein said UTAA is about 99.5% free of immunoglobulin.

71. (Canceled) The composition of claim 62, wherein said UTAA contains glycosidase-sensitive carbohydrates.

72. The method of claim 65, wherein the observed enhancement of antibody production is about 2- to 5-fold.

73. A pharmaceutical composition comprising (i) an antigen composition comprising a substantially purified tumor antigen, wherein the tumor antigen is identified as comprising Urinary

Tumor Associated Antigen (UTAA) subunit which, after reduction by β -mercaptoethanol and separation by SDS-polyacrylamide gel electrophoresis, exhibits a molecular weight of about 90 to 100 kD and (ii) a pharmaceutical buffer.

74. The pharmaceutical composition of claim 73, wherein said antigen composition is present as at least about 0.63 μ g/ml of buffer.

75. The pharmaceutical composition of claim 74, wherein said antigen composition is present as at least about 1.4 μ g/ml of buffer.

76. The pharmaceutical composition of claim 75, wherein said antigen composition is present as at least about 36 μ g/ml of buffer.

77. The pharmaceutical composition of claim 76, wherein said antigen composition is present as at least about 40 μ g/ml of buffer.

78. The pharmaceutical composition of claim 77, wherein said antigen composition is present as at least about 100 μ g/ml of buffer.

79. The pharmaceutical composition of claim 78, wherein said antigen composition is present as at least about 200 μ g/ml of buffer.